

SEP 13 2006

Patent

Avago Docket No.: 10030503-1

REMARKS

This is a full and timely response to the non-final Office Action mailed by the U.S. Patent and Trademark Office on June 28, 2006. Claims 1-15 are pending in the present application. Claims 1, 6 and 10 are amended to define further the invention. Support for the amendments to claims 1, 6 and 10 can be found in the specification at least in paragraphs 0020 through 0023 and in FIGS. 3A, 3B, 3C, 3D and 4. Accordingly, no new matter is added to the application. Claims 4 and 9 are amended to comply with 35 U.S.C. § 112, First Paragraph. In view of the foregoing amendments and following remarks, reconsideration and allowance of the present application and claims are respectfully requested.

Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 4 and 9 stand rejected under 35 U.S.C. § 112, First Paragraph, as allegedly failing to comply with the enablement requirement. The Office Action alleges that the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Office Action states "while the specification is enabling for describing how the components recited in the claims are connected, the specification is not enabling as to the actual operation and/or functionality of the components, specifically the claimed predictor, cross correlate and interpolator, in relation to how they assist the device in computing user position input data."

Applicants have amended claims 4 and 9 to comply with 35 U.S.C. § 112, First Paragraph. Applicants respectfully attempt to clarify the claimed subject matter. Applicants submit that the "cross correlator" "receives and processes data from the current RAM 20, reference RAM 26, and the predictor 28." See specification, paragraph 0030. Applicants also submit that the "interpolator" receives the result of the cross-correlator and "in turn sends it to the predictor 28 and the firmware decisions and controller 16." See specification, paragraph 0030. Applicants submit that the "predictor" receives data from the interpolator 30. See specification, paragraph 0030. Applicants have amended claim 4 to recite a "serial port." Applicants have replaced "read access memory" with the term "random access memory." Applicants have amended claims 4 and 9 to recite "transceiving data to and from the controller."

Accordingly, Applicants respectfully submit that claims 4 and 9 are in compliance with 35 U.S.C. § 112, First Paragraph, and respectfully request that the rejection be withdrawn.

Rejections Under 35 U.S.C. § 102

Claims 1-3, 5-8 and 10-15 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by European Patent No. 0 929 028 to Kramer (hereafter *Kramer*).

A proper rejection of a claim under 35 U.S.C. § 102 requires that a single prior art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983). Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. *See, e.g., In re Paulsen*, 30 F.3d 1475, 31 USPQ2d 1671 (Fed. Cir. 1994); *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990). Alternatively, anticipation requires that each and every element of the claimed invention be embodied in a single prior art device or practice. *See, e.g., Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992). The test is the same for a process. Anticipation requires identity of the claimed process and a process of the prior art. The claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference. *See, e.g., Glaverbel S.A. v. Northlake Mkt'g & Supp., Inc.*, 45 F.3d 1550, 33 USPQ2d 1496 (Fed. Cir. 1995). Those elements must either be inherent or disclosed expressly. *See, e.g., Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 7 USPQ2d 1057 (Fed. Cir. 1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). Those elements must also be arranged as in the claim. *See, e.g., Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986). For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *See, e.g., Scripps Clinic & Res. Found. v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001 (Fed. Cir. 1991).

Accordingly, the single prior art reference must properly disclose, teach or suggest each element of the claimed invention.

Kramer discloses a method and system for providing user input to a computer, or the like, having a display by detecting a change in fingerprint pattern of a user. *See Kramer*, Abstract. According to *Kramer*, the "device 19 includes a horizontal scanning stage 31 and a vertical scanning stage 33. Scanning stages 31 and 33 enable one cell 29 at the time according to a predetermined scanning pattern. In the preferred embodiment, each cell 29 is

scanned once each millisecond to produce a frame rate of 1,000 frames per second.” See *Kramer*, paragraph 0022. *Kramer* continues stating “[a]n A/D converter 37 is connected to receive the output of each cell 29 of array 27.” See *Kramer*, paragraph 0024. From this it is clear that *Kramer* requires that *every* cell 29 in the array 27 be scanned for each frame.

In marked contrast to *Kramer*, Applicants’ independent claim 1 includes at least “an image detector, receiving images from the pressure sensor array, generating cursor manipulation corresponding to changes between the images, *wherein a sampling resolution of the sensing surface is based on at least one of periodically sampling alternating pixels in an array and monitoring at least one of a plurality of zones in an array, wherein the plurality of zones are evenly and unevenly distributed throughout the array, and where the plurality of zones populate the array with varying density, and wherein the sampling resolution is user selectable based on a size of a feature of a fingerprint.*” Applicants respectfully submit that at least this feature is neither disclosed, taught nor suggested by *Kramer*.

Applicants’ independent claim 6 includes at least “a sensing surface operative to sense contact by human finger, the contact corresponding to applied pressure, the sensing surface having a sampling resolution *based on at least one of periodically sampling alternating pixels in an array and monitoring at least one of a plurality of zones in an array, wherein the plurality of zones are evenly and unevenly distributed throughout the array, and where the plurality of zones populate the array with varying density.*” Applicants respectfully submit that at least this feature is neither disclosed, taught nor suggested by *Kramer*.

Applicants’ independent claim 10 includes at least “sampling a portion of an array of pressure sensors to generate a first sample *based on at least one of periodically sampling alternating pixels in an array and monitoring at least one of a plurality of zones in an array, wherein the plurality of zones are evenly and unevenly distributed throughout the array, and where the plurality of zones populate the array with varying density.*” Applicants respectfully submit that at least this step is neither disclosed, taught nor suggested by *Kramer*.

Accordingly, Applicants respectfully submit that independent claims 1, 6 and 10 are allowable over *Kramer*. Further, Applicants respectfully submit that dependent claims 2, 3 and 5, which depend directly from allowable claim 1; dependent claims 7 and 8 which depend directly from allowable claim 6; and dependent claims 11-15, which depend either directly or indirectly from allowable claim 10, are allowable for at least the reason that they depend from

SEP 13 2006

Patent
Avago Docket No.: 10030503-1

allowable independent claims. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (Citations omitted).

Rejections Under 35 U.S.C. § 103

Claims 4 and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Kramer* in view of U.S. Patent No. 5,841,078 to Miller *et al.* (hereafter *Miller*). For a claim to be properly rejected under 35 U.S.C. § 103, "[t]he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (Citations omitted). Further, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780 (Fed Cir. 1992).

Applicant respectfully submits that dependent claim 4, which depends directly from allowable claim 1; and dependent claim 9, which depends directly from allowable claim 6 are allowable for at least the reason that they depend directly from allowable independent claims. *In re Fine, supra.*


CONCLUSION

Should the Examiner have any comments regarding the Applicants' response or believe that a teleconference would expedite prosecution of the pending claims, Applicants request that the Examiner telephone Applicants' undersigned attorney.

Respectfully submitted,

Smith Frohwein Tempel Greenlee Blaha LLC
Customer No. 35856

By:


Michael J. Tempel
Registration No. 41,344
(770) 709-0056